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David H. Brinkman, Reg. No. 40,532

Date

2/7/06

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Hideo Shidara et al.
Serial No.: 10/526,988
Filed: March 7, 2005
Group Art Unit: 1761
Confirmation No.: 6987
Examiner: Unknown
Title: **CONTINUOUS EMULSIFICATION PROCESS FOR PROCESS CHEESE TYPE AND EQUIPMENT THEREFOR, AND CONTINUOUS PRODUCTION METHOD FOR PROCESS CHEESE TYPE AND EQUIPMENT THEREFOR**
Attorney Docket: SHG-037P2

Cincinnati, Ohio 45202

February 7, 2006

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

PAYMENT OF DEFICIENCY OF FILING FEE

An error was noted on the Filing Receipt (copy attached) issued in the above-identified application. Specifically, the "Filing Fee Received" has been erroneously recorded.

The "Filing Fee Received" as shown on the Filing Receipt is incorrectly shown as "\$900". The correct "Filing Fee Received" should be "\$1,260". Applicants have discovered that the Multiple Dependent Claim fee of \$360 for a large entity was

02/10/2006 SSESHE1 00000022 10526988

360.00 DP

01 FC:1203


inadvertently not paid with the original Filing Fee. Applicants have also attached a copy of the PTO's Patent Application Fee Determination Record (Form PTO-875) and a copy of the PTO's Fee Record Sheet showing that the multiple dependent claim fee was not charged (Form PTO-1556).

The present application has a total of 9 claims of which 3 are independent. Claims 7 and 9 have multiple dependencies. A copy of the claims as filed in the above-referenced application is attached.

Attached is a check for \$360 for the deficiency owed for multiple dependent claims. If any other fees are deemed necessary, these may be charged to Deposit Account No. 23-3000.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.

By: 
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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/526,988	03/07/2005	1761	980 \$1,260	SHG-037P2-319/OSP-17326	1	9	13

26875
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CONFIRMATION NO. 6987
 CORRECTED FILING RECEIPT



OC000000017923854

Date Mailed: 01/26/2006

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

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 Takeshi Goto, Sagamihara-shi, JAPAN;

Power of Attorney: The patent practitioners associated with Customer Number 26875.

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/JP04/09869 07/05/2004

Foreign Applications

JAPAN 2003-273068 07/10/2003

If Required, Foreign Filing License Granted: 01/26/2006

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/526,988**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

Title

Continuous emulsification process for process cheese type and equipment therefor, and continuous production method for process cheese type and equipment therefor

Preliminary Class

426

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Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

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Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

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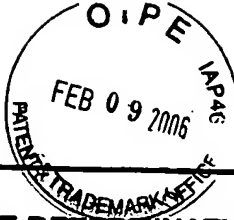
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**PATENT APPLICATION FEE DETERMINATION RECORD**

Effective December 8, 2004

Application or Docket Number

10/526988**CLAIMS AS FILED - PART I**

	(Column 1)	(Column 2)
U.S. NATIONAL STAGE FEES		
BASIC FEE	SMALL ENT. = \$ 150	LARGE ENT. = \$ 300
EXAMINATION FEE	Satisfies PCT Article 33(1)-(4) = \$ 50 / \$ 100	All other situations = \$ 100 / \$ 200
SEARCH FEE	U.S. is ISA = \$ 50 / \$ 100 ALL other countries = \$ 200 / \$ 400	All other situations = \$ 250 / \$ 500
FEE FOR EXTRA SPEC. PGS.	minus 100 =	/ 50 =
TOTAL CHARGEABLE CLAIMS	9 minus 20 =	
INDEPENDENT CLAIMS	3 (1) minus 3 =	
MULTIPLE DEPENDENT CLAIM PRESENT		<input type="checkbox"/>

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐

OR

OTHER THAN SMALL ENTITY

RATE	FEE		RATE	FEE
BASIC FEE		OR	BASIC FEE	300
EXAM. FEE			EXAM. FEE	200
SEARCH FEE			SEARCH FEE	400
X \$ 125 =			X \$ 250 =	
X \$ 25 =		OR	X \$ 50 =	
X \$ 100 =		OR	X \$ 200 =	
+ \$ 180 =		OR	+ \$ 360 =	
TOTAL		OR	TOTAL	

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus	**
Independent	*	Minus	***
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			<input type="checkbox"/>

SMALL ENTITY

OR

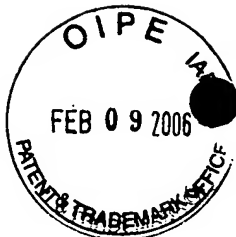
OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X \$ 25 =		OR	X \$ 50 =	
X \$ 100 =		OR	X \$ 200 =	
+ \$ 180 =		OR	+ \$ 360 =	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus	**
Independent	*	Minus	***
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM			<input type="checkbox"/>

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X \$ 25 =		OR	X \$ 50 =	
X \$ 100 =		OR	X \$ 200 =	
+ \$ 180 =		OR	+ \$ 360 =	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

- * If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 - ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than "20", enter "20".
 - *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than "3", enter "3".
- The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.



PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

03/15/2005 SNAJARRO 00000074 10526988

01 FC:1631	300.00 OP
02 FC:1633	200.00 OP
03 FC:1642	400.00 OP

PTO-1556
(5/87)



CLAIMS

1. A continuous emulsification process for process cheese type in which a series is continuously conducted, which comprises a heating process for agitating and emulsifying process cheese type at any agitation intensity using an agitation device provided in a vessel while the process cheese type is heated in the vessel applied with certain back pressure, a holding process for holding the heated process cheese type at a fixed time while the heated process cheese is flowed into a pipe, and a cooling process for cooling the held process cheese type,

wherein a transducer of an oscillating viscometer, is immersed in the process cheese type in the holding process or after the cooling process such that the transducer is not directly contacted with the process cheese type; and

wherein agitation intensity of the agitation device and/or back pressure applied to the vessel in the heating process is adjusted such that a detected value of the immersed transducer becomes near a target value which is set in advance, and thereby, production conditions are controlled automatically and the process cheese type is emulsified such that the viscosity of the process cheese in the holding process or after cooling process becomes near a target viscosity.

2. A continuous emulsification process according to claim 1, wherein when the transducer of the oscillating viscometer is immersed in process cheese type, the transducer is coated with a coating material in advance so as not to contact directly the process cheese type.

3. A continuous production method for process cheese type in which process cheese

type ingredients are kneaded, the kneaded process cheese type ingredients are transferred to a vessel applied with certain back pressure, and process cheese type is agitated and emulsified with any agitation intensity using an agitation device provided to the vessel while heating in the vessel, the heated process cheese type is held by flowing in a pipe at a certain period, the held process cheese type is cooled, and the cooled process cheese type is molded and filled and a process cheese type product is produced,

wherein a transducer of an oscillating viscometer is immersed in the process cheese type during holding or after cooling such that the transducer is not directly contacted with the process cheese type; and

wherein agitation intensity of the agitation device and/or back pressure applied to the vessel during heating is adjusted such that a detected value of the immersed transducer becomes near a set point which is set in advance, and thereby production conditions are controlled automatically so that the viscosity of process cheese type during holding or after cooling becomes near a target viscosity.

4. A continuous production method according to claim 3, wherein when the transducer of the oscillating viscometer is immersed in the process cheese type, the transducer is coated with a coating material in advance so as not to contact directly the process cheese type.

5. A continuous emulsification equipment for process cheese type comprising a heating equipment comprising a heating device for heating process cheese type and an agitation device for agitating the process cheese type at any agitation intensity, a holding pipe one end of which is connected to an outlet of the heating equipment and a back

pressure regulating valve is provided, a cooling device for cooling the process cheese type which is connected to the end of the holding pipe, and a carrying out pipe for carrying the process cheese type which is already emulsified, one end of which is connected to an outlet of the cooling device,

wherein an oscillating viscometer is provided to the holding pipe or the carrying out pipe,

wherein a transducer of the oscillating viscometer is immersed in the process cheese type flowing in the holding pipe or the carrying out pipe such that the transducer is not directly contacted with the process cheese type; and

wherein an output line showing detected values by the immersed transducer is connected with a display device, a recording device, and/or a printing device.

6. A continuous emulsification equipment according to claim 5, wherein the continuous emulsification equipment further comprises a control equipment for controlling automatically agitation intensity of the agitation device and/or opening of the back pressure regulating valve such that the detected values of the transducer becomes near a target value which is set in advance.

7. A continuous emulsification equipment according to one of claims 5 and 6, wherein the transducer of the oscillating viscometer is coated with a coating material.

8. A continuous emulsification equipment according to claim 7, wherein the coating material is made of fluorocarbon resin.

9. A continuous production equipment for process cheese type comprising a kneader for kneading process cheese type ingredients, the continuous emulsification equipment according to one of claims 5 to 8, and a molding and filling equipment for molding and filling the process cheese type which is sent through the carrying out pipe of the continuous emulsification equipment, and thereby a process cheese type product is produced.